

**401 KAR 51:001. Definitions and abbreviations of terms used in Title 401, Chapter 51.**

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
Department of Environmental Protection  
Division of Air Quality

RELATES TO: KRS 224.01-010, 224.20-100, 224.20-110, 224.20-120; 40 CFR Chapter I; Appendices A through K to 40 CFR 50; 40 CFR 51.100(s); 40 CFR 53; 40 CFR 60; Appendices A and B to 40 CFR 60; Appendix B to 40 CFR 61; 42 USC 7410; 42 USC 7411 (a)(8)

STATUTORY AUTHORITY: KRS 224.10-100

NECESSITY AND FUNCTION: KRS 224.10-100 requires the Natural Resources and Environmental Protection Cabinet to prescribe regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for the defining of terms used in Title 401, Chapter 51.

**Section 1. General definitions.** As used in the Division for Air Quality administrative regulations of Title 401, Chapter 51, unless the content clearly indicates otherwise in a specific administrative regulation, the following terms shall have the following meanings:

- (1) "Affected facility" means an apparatus, building, operation, road, or other entity or series of entities which emits or may emit an air contaminant into the outdoor atmosphere.
- (2) "Air contaminant" has the meaning given it in KRS 224.01-010.
- (3) "Air pollutant" means an air contaminant.
- (4) "Air pollution" has the meaning given it in KRS 224.01-010.
- (5) "Air pollution control equipment" means a mechanism, device or contrivance used to control or prevent air pollution, which is not, aside from air pollution control laws and regulations, vital to production of the normal product of the source or to its normal operation.
- (6) "Alteration" means:
  - (a) The installation or replacement of air pollution control equipment at a source;
  - (b) A physical change in or change in the method of operation of an affected facility which increases the potential to emit of a pollutant (to which a standard applies) emitted by the facility or which results in the emission of an air pollutant (to which a standard applies) not previously emitted.
- (7) "Alternative method" means a method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the cabinet's and the U.S. EPA's satisfaction to, in specific cases, produce results adequate for its determination of compliance.
- (8) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.
- (9) "Ambient air quality standard" means a numerical expression of a specified concentration level for a particular air contaminant and the time averaging interval over which that concentration level is measured and is a goal to be achieved in a stated time through the application of appropriate preventive or control measures.

- (10) "Cabinet" has the meaning given it in KRS 224.01-010.
- (11) "Capital expenditure" means an expenditure for a physical or operational change to an affected facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the Internal Revenue Service (IRS) Publication 534 which has been incorporated by reference in 401 KAR 50:010, and the affected facility's basis, as defined by section 1012 of the Internal Revenue Code which has been incorporated by reference in 401 KAR 50:010. However, the total expenditure for a physical or operational change to an affected facility shall not be reduced by any "excluded additions" as defined in IRS Publication 534, as would be done for tax purposes.
- (12) "Commence" means that an owner or operator has undertaken a continuous program of construction, modification, or reconstruction of an affected facility, or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction, modification, or reconstruction of an affected facility.
- (13) "Compliance schedule" means a time schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with a limitation or standard.
- (14) "Construction" means fabrication, erection, installation or modification of an air contaminant source.
- (15) "Continuous monitoring system" means the total equipment, required under the applicable regulations used to sample, to condition (if applicable), to analyze and to provide a permanent record of emissions or process parameters.
- (16) "Director" means Director of the Division for Air Quality of the Natural Resources and Environmental Protection Cabinet.
- (17) "District" has the meaning given it in KRS 224.01-010.
- (18) "Emission standard" means that numerical limit which fixes the amount of an air contaminant or air contaminants that may be vented into the atmosphere (open air) from an affected facility or from air pollution control equipment installed in an affected facility.
- (19) "Equivalent method" means a method of sampling and analyzing for an air pollutant which has been demonstrated to the cabinet's and the U.S. EPA's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.
- (20) "Exempt solvent" means an organic compound listed in the definition of volatile organic compound as not participating in atmospheric photochemical reactions.
- (21) "Existing source" means a source which is not a new source.
- (22) "Extreme nonattainment county" or "extreme nonattainment area" means a county or portion of a county designated extreme nonattainment in 401 KAR 51:010.
- (23) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (24) "Fuel" means natural gas, petroleum, coal, wood, and any form of solid, liquid, or gaseous fuel derived from these materials for the purpose of

creating useful heat.

- (25) "Fugitive emissions" means the emissions of an air contaminant into the open air other than from a stack or air pollution control equipment exhaust.
- (26) "Hydrocarbon" means an organic compound consisting predominantly of carbon and hydrogen.
- (27) "Incineration" means the process of igniting and burning solid, semi-solid, liquid, or gaseous combustible wastes.
- (28) "Intermittent emissions" means emissions of particulate matter into the open air from a process which operates for less than any six (6) consecutive minutes.
- (29) "Major source" means a source of which the potential emission rate is equal to or greater than 100 tons per year of any one (1) of the following pollutants: particulate matter, sulfur oxides, nitrogen oxides, volatile organic compounds or carbon monoxide.
- (30) "Malfunction" means a failure of air pollution control equipment, or process equipment, or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.
- (31) "Marginal nonattainment county" or "marginal nonattainment area" means a county or portion of a county designated marginal nonattainment in 401 KAR 51:010.
- (32) "Moderate nonattainment county" or "moderate nonattainment area" means a county or portion of a county designated moderate nonattainment in 401 KAR 51:010.
- (33) "Modification" means a physical change in, or change in the method of operation of, an affected facility which increases the amount of an air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of an air pollutant (to which a standard applies) into the atmosphere not previously emitted. The following shall not, by themselves, be considered modifications:
  - (a) Maintenance, repair, and replacement which the cabinet determines to be routine for a source category;
  - (b) An increase in production rate of an affected facility, if that increase can be accomplished without a capital expenditure on that facility;
  - (c) An increase in the hours of operation;
  - (d) Use of an alternative fuel or raw material if, prior to the date any standard becomes applicable to that source type, the affected facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in 42 USC 7411(a)(8), shall not be considered a modification;
  - (e) The addition or use of any system or device whose primary function

is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the cabinet determines to be less environmentally beneficial;

- (f) The relocation or change in ownership of an existing facility.
- (34) "Monitoring device" means the total equipment, required in applicable regulations, used to measure and record (if applicable) process parameters.
- (35) "New source" means a source, the construction, reconstruction, or modification of which commenced on or after the classification date as defined in the applicable regulation. A source, upon reconstruction, becomes a new source, irrespective of a change in emission rate.
- (36) "Nitrogen oxides" means all oxides of nitrogen except nitrous oxide, as measured by test methods specified by the cabinet.
- (37) "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
- (38) "Owner or operator" means a person who owns, leases, operates, controls, or supervises an affected facility or a source to which an affected facility is a part.
- (39) "Particulate matter" means a material, except uncombined water, which exists in a finely divided form as a liquid or a solid as measured by the appropriate approved test method.
- (40) "Particulate matter emissions" means, except as used in 40 CFR 60, all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR Chapter 1, or by a test method specified in the approved state implementation plan.
- (41) "Person" means an individual, public or private corporation, political subdivision, government agency, municipality, industry, co-partnership, association, firm, trust, estate, or other entity.
- (42) "PM<sub>10</sub>" means particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers as measured by a reference method based on Appendix J to 40 CFR 50, which has been incorporated by reference in 401 KAR 50:015, and designated in accordance with 40 CFR 53, or by an equivalent method designated in accordance with 40 CFR 53.
- (43) "PM<sub>10</sub> emissions" means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in 40 CFR Chapter- I, or by a test method specified in the approved state implementation plan.
- (44) "Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. A physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions shall not count in determining the potential to emit of a stationary source.

- (45) "Reconstruction" means the replacement of components of an existing affected facility to the extent that the fixed capital cost of the new components exceeds fifty (50) percent of the fixed capital cost that would be required to construct a comparable entirely new affected facility, and it is technologically and economically feasible to meet the applicable new source standards. Individual sections of these administrative regulations may include specific provisions which refine and delimit the concept of reconstruction set forth in this subsection. The cabinet's determination as to whether the proposed replacement constitutes reconstruction shall be based on:
- (a) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
  - (b) The estimated life of the affected facility after the replacements compared to the life of a comparable entirely new affected facility;
  - (c) The extent to which the components being replaced cause or contribute to the emissions from the affected facility; and
  - (d) Economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (46) "Reference method" means a method of sampling and analyzing for an air pollutant as prescribed by Appendices A through K to 40 CFR 50, Appendices A and B to 40 CFR 60, and Appendix B to 40 CFR 61, which has been incorporated by reference in 401 KAR 50:015. This term may be more narrowly defined within a specific regulation.
- (47) "Run" means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.
- (48) "Secondary emissions" means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. Secondary emissions shall be specific, well defined, quantifiable, and shall impact the same general area as does the stationary source modification which causes the secondary emissions. Secondary emissions may include, but are not limited to emissions from an offsite support facility which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include emissions which come directly from a mobile source, such as the emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.
- (49) "Serious nonattainment county" or "serious nonattainment area" means a county or portion of a county designated serious nonattainment in 401 KAR 51:010.
- (50) "Severe nonattainment county" or "severe nonattainment area" means a county or portion of a county designated severe nonattainment in 401 KAR 51:010.
- (51) "Shutdown" means the cessation of an operation.
- (52) "Source" means one (1) or more affected facilities contained within a given contiguous property line. The property shall be considered contiguous if separated only by a public thoroughfare, stream, or other

right of way.

- (53) "Stack or chimney" means a flue, conduit, or duct arranged to conduct emissions to the atmosphere.
- (54) "Standard" means an emission standard, a standard of performance, or an ambient air quality standard as promulgated under the administrative regulations of the Division for Air Quality or the emission control requirements necessary to comply with Title 401, Chapter 51, of the administrative regulations of the Division for Air Quality.
- (55) "Standard conditions:"
  - (a) For source measurements means twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit) and a pressure of 760 mm Hg (29.92 in. of Hg);
  - (b) For the purpose of air quality determinations means twenty-five (25) degrees Celsius and a reference pressure of 760 mm Hg.
- (56) "Start-up" means the setting in operation of an affected facility.
- (57) "State implementation plan" means the most recently prepared plan or revision required by 42 USC 7410 which has been approved by the U.S. EPA.
- (58) "Total suspended particulate" means particulate matter as measured by the method described in Appendix B of 40 CFR 50, which has been incorporated by reference in 401 KAR 50:015.
- (59) "Uncombined water" means water which can be separated from a compound by ordinary physical means and which is not bound to a compound by internal molecular forces.
- (60) "Urban county" means a county which is a part of an urbanized area with a population of greater than 200,000 based upon the 1980 census. If a portion of a county is a part of an urbanized area, then the entire county shall be classified as urban with respect to the administrative regulations of the Division for Air Quality.
- (61) "Urbanized area" means an area defined as such by the U.S. Department of Commerce, Bureau of Census.
- (62) "Volatile organic compound" or "VOC" means an organic compound which participates in atmospheric photochemical reactions. This includes an organic compound other than the following compounds: methane; ethane; carbon monoxide; carbon dioxide; carbonic acid; metallic carbides or carbonates; ammonium carbonate; methylene chloride; 1,1,1-trichloroethane (methyl chloroform); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (HCFC-22); trifluoromethane (HFC-23); 1,1,2-trichloroethane (CFC-113); dichlorotetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); dichlorotrifluoroethane (HCFC-123); tetrafluoroethane (HFC-134a); dichlorofluoroethane (HCFC-141b); chlorodifluoroethane (HCFC-142b); chloro-1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); parachlorobenzotrifluoride (PCBTF); cyclic, branched, or linear completely methylated siloxanes; perchloroethylene (tetrachloroethylene) and perfluorocarbon compounds which fall into these classes:
  - (a) Cyclic, branched, or linear, completely fluorinated alkanes;
  - (b) Cyclic, branched, or linear, completely fluorinated ethers with no

unsaturations;

- (c) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
- (d) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine. These compounds have been determined to have negligible photochemical reactivity. For purposes of determining compliance with emission limits, VOCs shall be measured by test methods that have been approved by the cabinet and the U.S.EPA. If a method used also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

**Section 2. Abbreviations.** The abbreviations used in the administrative regulations of Title 401, Chapters 50 to 65, shall have the following meanings:

AOAC - Association of Official Analytical Chemists  
ANSI - American National Standards Institute  
ASTM - American Society for Testing and Materials  
BOD - Biochemical oxidant demand  
BTU - British Thermal Unit  
°C - Degree Celsius (centigrade)  
Cal - calorie  
cfm - cubic feet per minute  
CFR - Code of Federal Regulations  
CH<sub>4</sub> - methane  
CO - Carbon monoxide  
CO<sub>2</sub> - Carbon dioxide  
COD - Chemical oxidant demand  
dscf - dry cubic feet at standard conditions  
dscm - dry cubic meter at standard conditions  
°F - Degree Fahrenheit  
ft - feet  
g - grain  
gal - gallon  
gr - grain  
hr - hour  
HCl - Hydrochloric acid  
Hg - mercury  
HF - Hydrogen fluoride  
H<sub>2</sub>O - water  
H<sub>2</sub>S - Hydrogen sulfide  
H<sub>2</sub>SO<sub>4</sub> - Sulfuric acid  
in - inch  
J - joule  
KAR - Kentucky Administrative Regulations  
kg - kilogram  
KRS - Kentucky Revised Statutes  
L - liter  
lb - pound  
m - meter  
m<sup>3</sup> - cubic meter  
min - minute  
mg - milligram  
MJ - megajoules  
MM - million  
mm - millimeter  
mo - month  
Ng - nanograms

$N_2$  - Nitrogen  
 NO - Nitric oxide  
 $N_2O$  - Nitrogen dioxide  
 $NO_x$  - Nitrogen oxides  
 oz - ounce  
 $O_2$  - oxygen  
 $O_3$  - ozone  
 ppb - parts per billion  
 ppm - parts per million  
 ppm (w/w) - parts per million (weight by weight)  
 $\mu g$  - microgram  
 psia - pounds per square inch absolute  
 psig - pounds per square inch gage  
 S - at standard conditions  
 sec - second  
 SIP - State implementation plan  
 $SO_2$  - Sulfur dioxide  
 sq - square  
 TAPPI - Technical Association of the Pulp and Paper Industry  
 TSP - Total suspended particulates  
 TSS - Total suspended solids  
 U.S. EPA - United States Environmental Protection Agency  
 UTM - Universal Transverse Mercator  
 VOC - Volatile organic compound  
 yd - yard

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